Technology management is a field of study designed to prepare technical and/or management-oriented professionals for employment in business, industry, education, and government. Technology management is primarily involved with the management, operation, and maintenance of complex technological systems while engineering and engineering technology are primarily involved with the design and installation of these systems.

Technology management: telecommunications & computer networking students will...

- Be prepared to design, implement, and support networked systems in both standard and enterprise settings.
- Gain a solid foundation in the hardware and architecture of telecommunication networks and systems, operating systems and applications, system design and analysis, networking theory and solutions, types of networks including fiber optics and wireless, network management and control, network and flow optimization, network security, configuring, and troubleshooting.
- Be provided with comprehensive knowledge, skills, and necessary training to pursue careers as information technology professionals.
- Learn concepts of network design, integration, security, administration, and management of computing and telecommunications technologies.
- Learn how to assess and identify user needs and configure and implement systems using current and emerging technologies in the networking and telecommunications field.

Career Planning

Career preparation is part of the mission of Southeast. 100% of programs offer our students an internship, study-abroad program, clinical opportunity, student teaching or research internship.

The Office of Career Services in Academic Hall 057 can provide students with professional career counseling and coaching, resume critiques, practice interviews, job search strategies, career events, networking opportunities, and more.

<table>
<thead>
<tr>
<th>Demonstrated Career Proficiency is a Requirement of all Southeast Students</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CL001  First Semester</td>
<td>Students connect academic career planning by completing an online career assessment</td>
</tr>
<tr>
<td>CL002  Second Semester</td>
<td>Students learn more about resources available to enhance academic and career planning</td>
</tr>
<tr>
<td>CL003  Junior Year</td>
<td>Students learn about continued career planning, job search strategies, and networking</td>
</tr>
<tr>
<td>CL004  Senior Year</td>
<td>Students learn about resume development, professional communication, interviewing, and transitioning to the first job from college</td>
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</tbody>
</table>

Career Opportunities

- Information Technology Specialist
- Network Administrator/Specialist
- Network Engineer
- Network Manager
- System Administrator
- Telecommunications Specialist
- Technical Specialist

Equipment and Computer Programs

We have developed laboratories to provide our students with an opportunity to master a working knowledge of the basic fundamentals to advanced concepts in network applications and systems administration. Courses are accompanied by hands-on laboratories in which students will:

- Design, configure, and set up networked and telecommunications systems, client server programming, and network administration.
- Configure network hardware and software on Linux and Microsoft-based microcomputers that are connected to wireless systems, the Internet, and a LAN/WAN with switches and routers.
- Perform network protocol analysis and network performance using test equipment and hardware tools such as OptiView, Signal Pro, NS, Qualinet, and Opnet.
- Work with multi-user, multi-tasking network operating systems such as UNIX, Linux, and Windows Server with a focus on network administration.
- Learn principles of communication systems, communication protocols such as Kermit, HDLC, and performance measurement of wired and wireless systems.
- Learn principles and assembling of computers and installation, maintenance, troubleshooting, and repair of computer peripherals and system expansion, including operating systems, memory, disk drives, printers, and displays.
- Develop WWW presence with Web technologies using HTML, scripting languages, and develop database connectivity.
- Learn concepts of systematic ongoing processes of network analysis, design, implementation, maintenance, and security management.
- Practice experiential problem-solving skills through a senior design capstone course for students to work in teams to solve open-ended industrial projects.

Special Options with Technology Management

Southeast Missouri State University offers an accelerated master’s degree for current Southeast technology management students. For more information, please see the MS: Technology Management degree map.

Southeast also offers a Master of Science in Technology Management.
 Bachelor of Science (BS)

This is a guide based on the 2017-2018 Undergraduate Bulletin and is subject to change. The time it takes to earn a degree will vary based on several factors such as dual enrollment, remediation, and summer enrollment. Students will meet with an academic advisor each semester and use DegreeWorks to monitor their individual progress.

### CURRICULUM CHECKLIST

#### TECHNOLOGY MANAGEMENT: TELECOMMUNICATIONS & COMPUTER NETWORKING OPTION - 85 hours

**Required Courses:**
- IM300 Technical Communication (3)
- IM301 Industrial Safety (3)
- IM311 Statistical Process Control (3)
- IM419 Industrial Supervision (3)
- IM506 Projects in IET (3)
- MA133 Plane Trigonometry (3)
- MA134 College Algebra (3)
- MA139 Applied Calculus (3)
- MN220 Engineering Econ Analysis (3)
- MN260 Technical Computer Programming Applications (3)
- PH120/020 Introductory Physics I (5)
- PH121/021 Introductory Physics II (5)
- SW207 Understanding Cultural & Social Diversity (3)
- U410 Manufacturing Research in a Global Society (3)

#### Telecommunications & Computer Networking Option:
- ET160 Basic Electricity and Electronics (3)
- ET245 Logic Circuits (3)
- TN255 Microcomputer Maintenance & Troubleshooting (3)
- TN275 Introduction to Networks (3)
- TN375 Routing/Switching Essentials (3)
- TN395 Server Maintenance & Troubleshooting (3)
- TN425 Wireless Communication & Mobile Data Networks (3)
- TN435 Network Security (3)
- TN475 Scaling Networks (3)
- TN553 Connecting Networks (3)
- TN556 Network Management (3)
- TN566 IP Telephony (3)

Choose 3 hours:
- CY201 Introduction to Cybersecurity (3)
- IM317 Cooperative Industrial Internship (3)

**University Studies Requirements** (not already listed above) – 36 hours:
- UI100 First Year Seminar
- EN100 English Composition
- Artistic Expression
- Written Expression
- Oral Expression
- Behavioral Systems
- Living Systems
- Political Systems
- Development of a Major Civilization

### SAMPLE FOUR-YEAR PLAN

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<tr>
<th><strong>Fall Semester</strong></th>
<th><strong>Spring Semester</strong></th>
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<tr>
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<td>TN475</td>
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<td>IM506</td>
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<td>TN566</td>
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**Degree requirements for all students:** a minimum of 120 credit hours, completion of University Studies program, completion of 39 senior division hours (300-599), career proficiencies (CL001-004), Writing Proficiency Exam (WP003), and completion of the Measure of Academic Proficiency and Progress (MAPP) at the senior level. Refer to the Undergraduate Bulletin or Degree Works for additional graduation requirements for your program.

If you have dual credit or transfer credit, please visit our transfer course equivalencies guide at semo.edu/transfercredit.